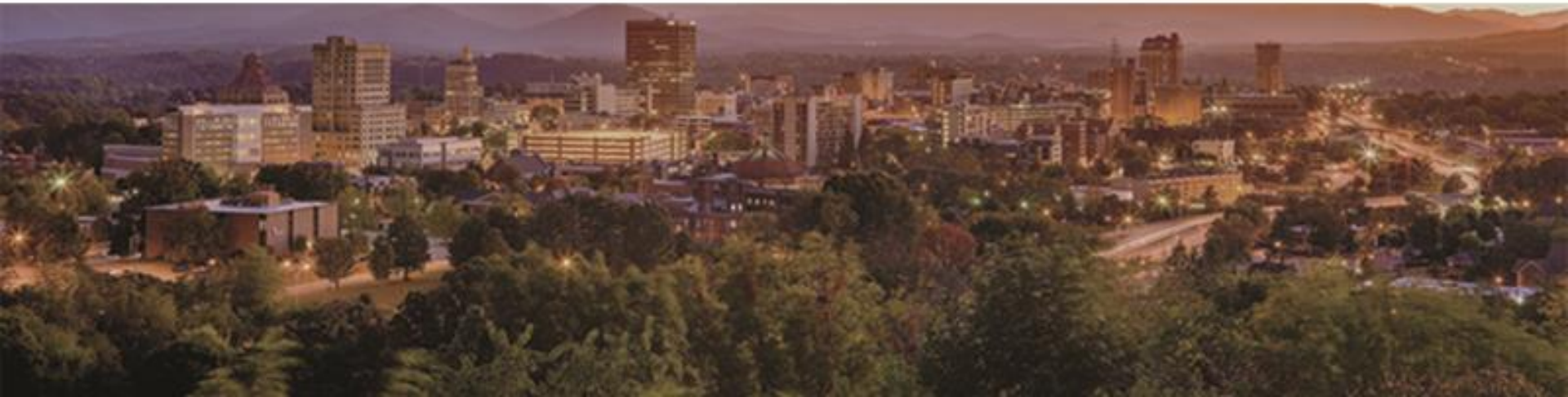
Nothing Compares
NORTH CAROLINA

September 26, 2016

Secondary Road Construction Program

Chris Deyton, PE



History of the Secondary Road Construction Program

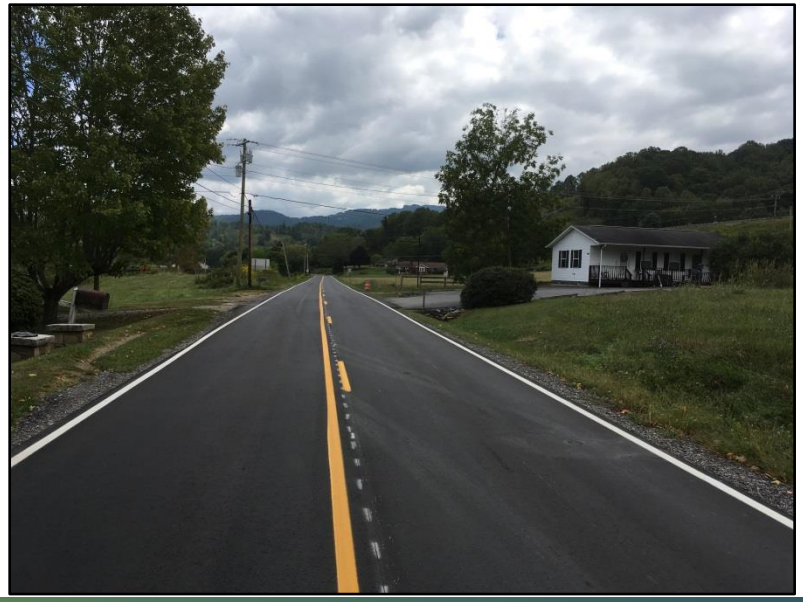
- Initial bill passed in 1989
  - Specifically set aside funding for the widening and paving of unpaved NCDOT roads
  - Set up the use of a priority system for roads in each county.

- Change in funding use passed in 2006
  - Allowed the use of the Secondary Road Construction Program funds to upgrade existing paved secondary roads
  - Created flexibility in being able to provide needed safety and congestion projects on secondary roads in each county

History of the Secondary Road Construction Program

- Change in priority and funding passed in 2012
  - Changed the priority system from individual counties to statewide
  - Funded at $12 million recurring
  - Removed the ability to use the funds for secondary paved road improvements

- Change in priority and funding passed in 2016
  - Required that half of the $12 million for Secondary Road Construction be divided out among the 14 NCDOT Divisions



Secondary Road Construction Impact in Division 13

County	Paving Goal	Miles Paved	Homes Served	Dollars Spent
Buncombe	257.66	237.11	7,473	$59,975,801
Burke	171.13	189.20	4,294	$38,221,087
Madison	210.27	189.49	2,391	$55,699,859
McDowell	96.01	116.58	2,403	$25,658,068
Mitchell	103.79	109.16	1,938	$23,215,012
Rutherford	240.93	245.51	2,937	$46,341,584
Yancey	101.41	111.65	2,110	$23,669,368
Total	**1,181.20**	**1,194.10**	**23,546**	**$272,750,779**

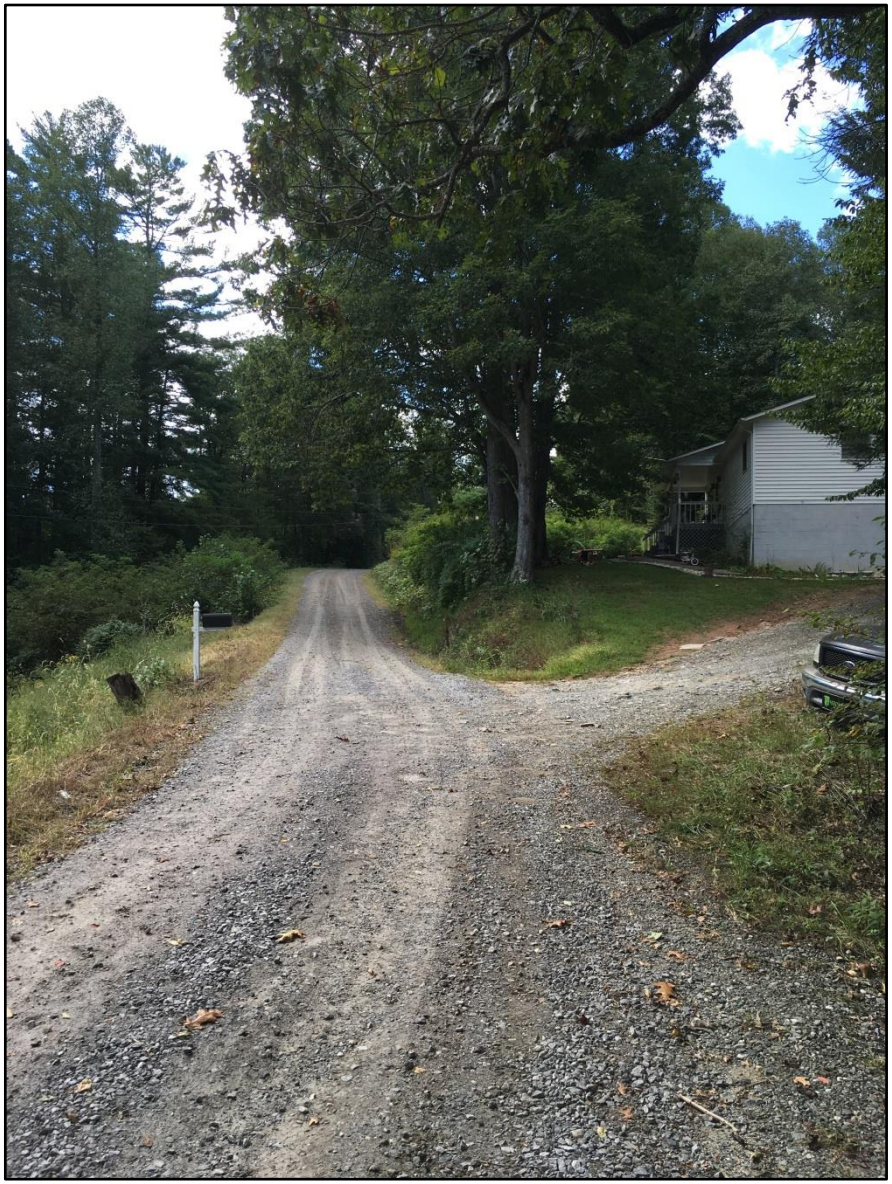
Data is from the commencement of the program in 1989 to present

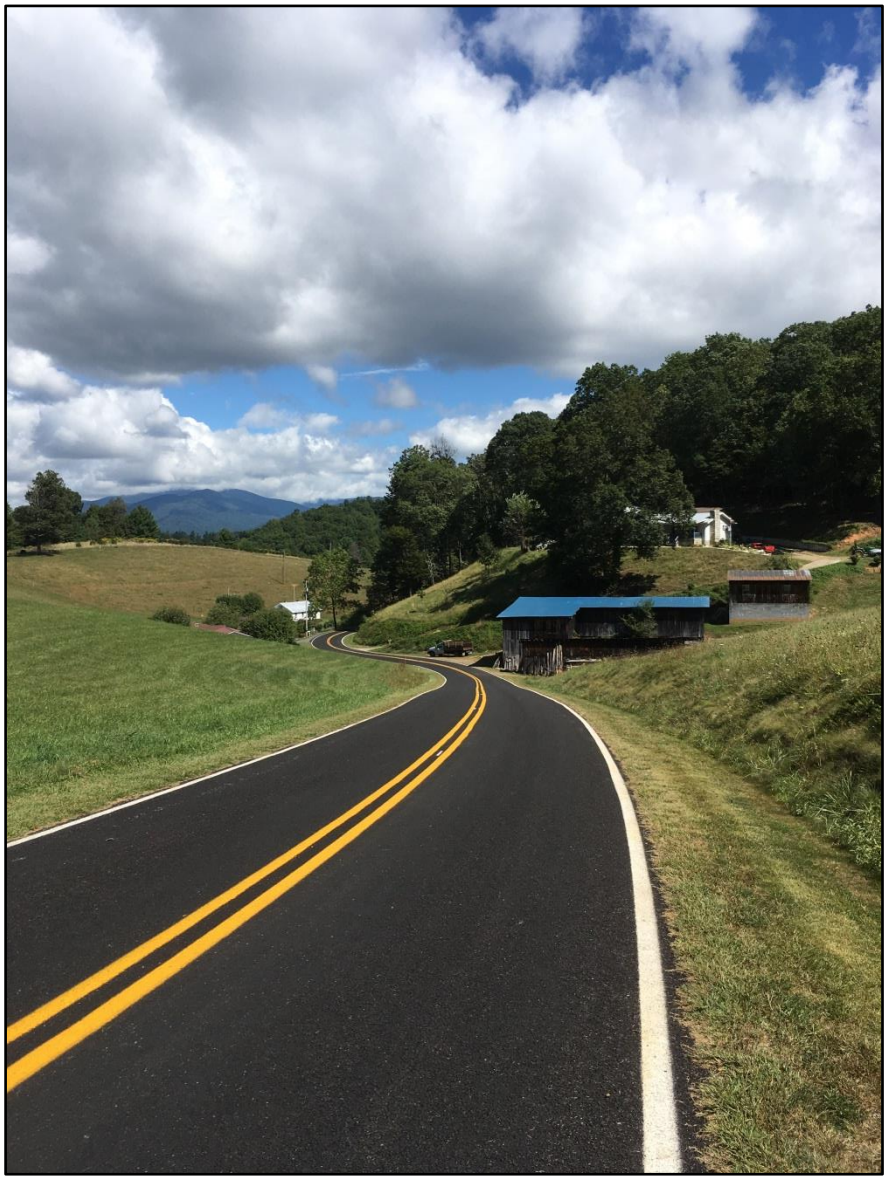
Statewide approximately 200,000 homes have been served by this program

Current Regional per Mile Cost to Widen and Pave Secondary Roads

Mountains	Piedmont	Coast
$675,000	$550,000	$480,000

Safety in Design

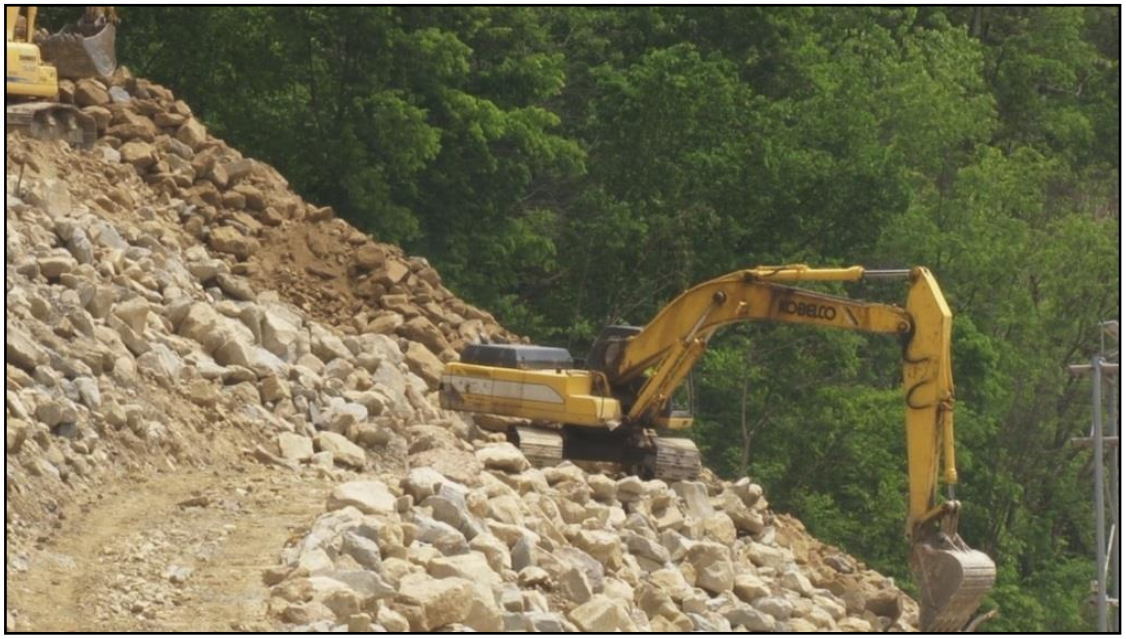




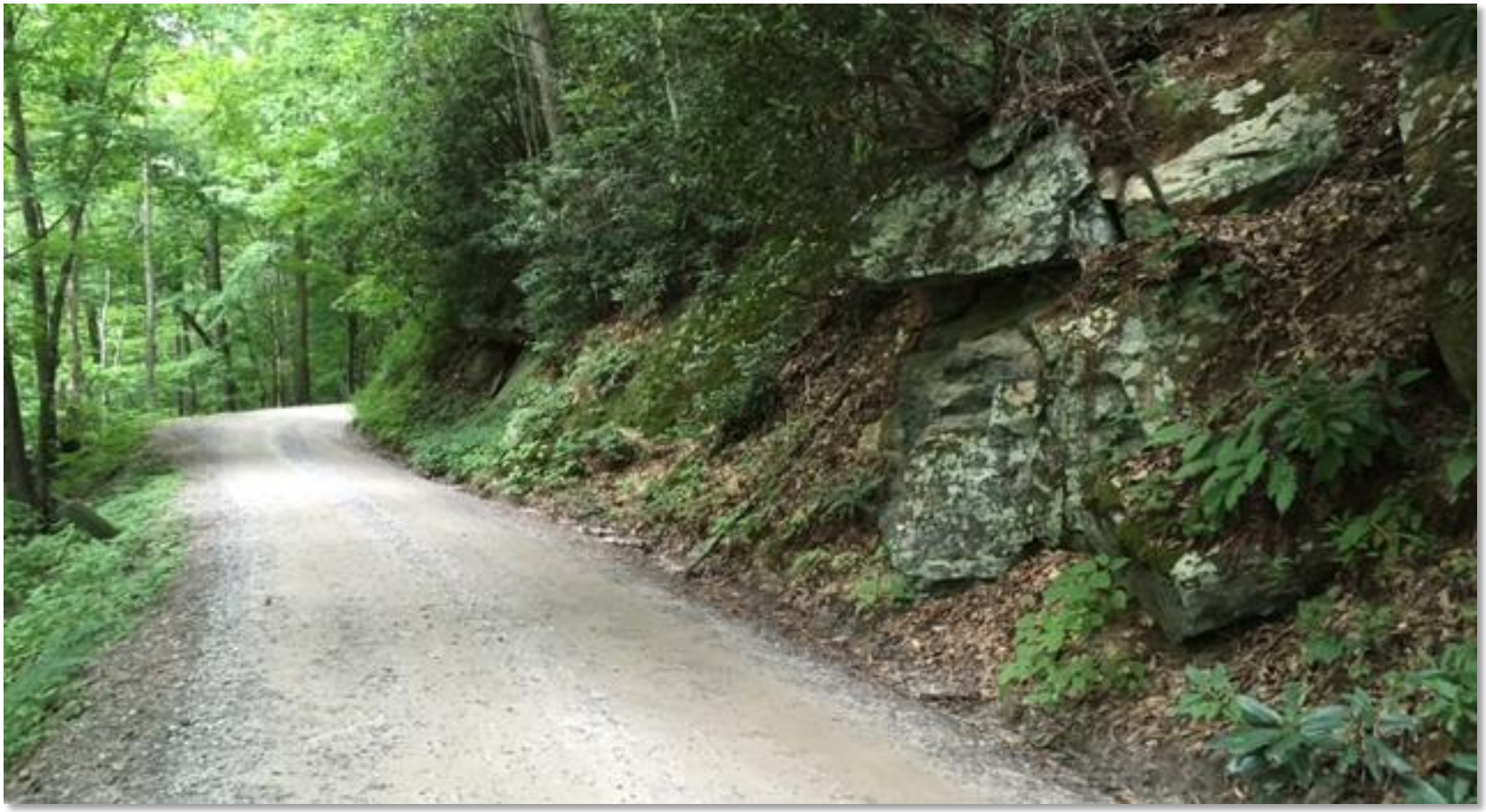
Safety in Design

- Design Standards
  - Minimum 20’ wide pavement for connecting roads, minimum 18’ wide pavement for dead end roads
  - Widen curves horizontal curves, flatten vertical curves
  - Provide appropriate shoulder width for driver recovery

- Retaining Walls
  - Gravity Walls (Shot Rock)
  - Soil Nail Walls
  - Pile Panel Walls



Road Construction in the Mountains



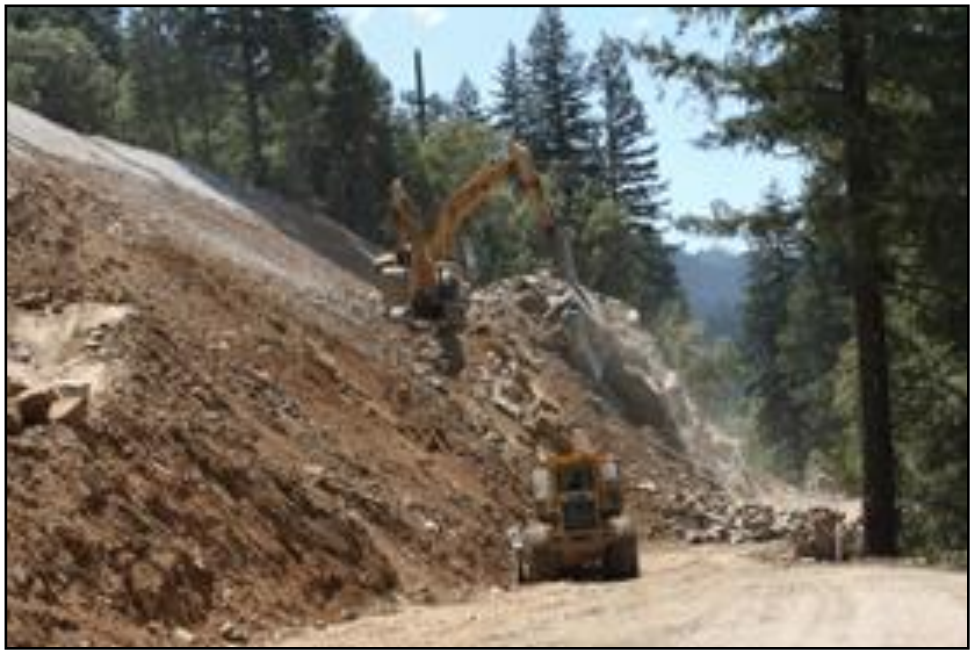
Road Construction in the Mountains - Grading

- Height and steepness of slopes
  - Takes more equipment to be able to perform the work safely
  - Takes more care in design & construction to not endanger homes and property

- Large amounts of waste material
  - Increased cost for hauling and for extra equipment to handle the material
  - Increase of overall project time

Road Construction in the Mountains - Grading

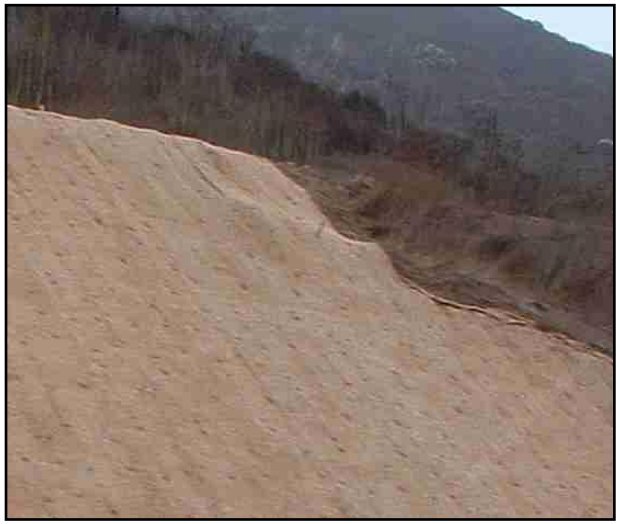
- Rock Excavation
  - Blasting costs
  - Increased cost for heavy equipment to handle rock
  - Increase in overall project time
  - Waste rock can be utilized for construction of gravity walls on project or for slope repair on other roads



Road Construction in the Mountains - Environmental

- Erosion Control
  - Have more stringent rules regarding erosion control in the mountains than other parts of the state
  - Due to terrain and climate have potential for washouts
  - Keep sediment out of streams

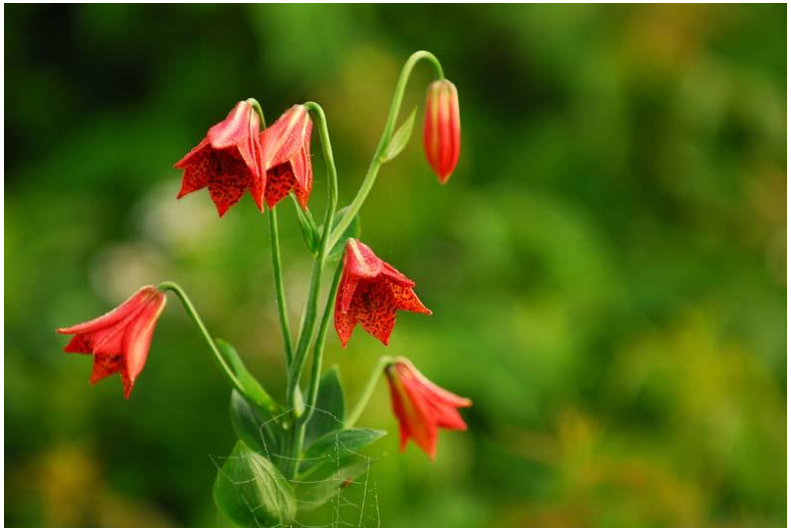
Temporary Stream Crossing

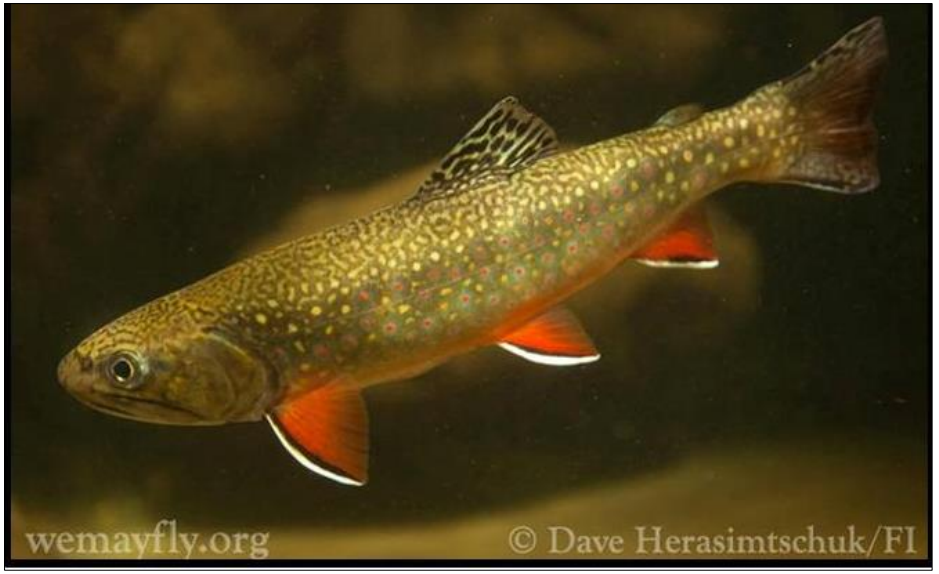


Steep Slope with Erosion Control Matting

Road Construction in the Mountains - Environmental

- Protected Flora and Fauna
  - Bats
  - Birds of Prey
  - Trout
  - Salamanders
  - Mussels
  - Flowers





Questions?